

AMENDMENTS TO THE CLAIMS

Please cancel claims 14-18 and 20, as set forth in the listing of claims that follows:

1. (Original) A method for forming an electrode, comprising:

combining a platinum precursor with a gold precursor to form an electrode ink;

forming the electrode ink into an electrode precursor;

firing the electrode precursor to form the electrode;

treating the electrode in an environment having an oxygen partial pressure of less than or equal to 500 ppm oxygen for a period of time sufficient produce an electrode with an exposed surface gold concentration of greater than or equal to about 6 times a bulk gold concentration in the electrode.

2. (Original) The method of Claim 1, wherein the surface gold concentration is greater than or equal to about 5 wt% based upon the total weight of the Pt-Au alloy at the surface of the electrode.

3. (Original) The method of Claim 2, wherein the surface gold concentration is about 5 wt% to about 25 wt% based upon the total weight of the Pt-Au alloy at the surface of the electrode.

4. (Original) The method of Claim 1, wherein the electrode is treated at a temperature of about 550°C to about 1,000°C and the period of time is about 0.5 hrs to about 10 hrs.

5. (Original) The method of Claim 1, wherein the bulk gold concentration is about 0.1 wt% to about 2.0 wt% of the total weight of the Pt-Au alloy in the electrode.

6. (Original) The method of Claim 5, wherein the bulk gold concentration is about 0.2 wt% to about 1.0 wt% of the total weight of the Pt-Au alloy in the electrode.

7. (Original) The method of Claim 1, wherein the electrode ink comprises about 43 wt% to about 62 wt% platinum, about 0.05 wt% to about 1 wt% gold, and about 38 wt% to about 48 wt% fugitive material, based upon the total weight of solids in the electrode ink.

8. (Original) The method of Claim 7, wherein the electrode ink further comprises about 2 to about 8 wt% oxides, based upon the total weight of the solids in the electrode ink.

9. (Original) The method of Claim 8, wherein the electrode ink comprises about 45 wt% to about 56 wt% platinum, about 0.1 wt% to about 0.7 wt% gold, about 40 wt% to about 48 wt% fugitive material, about 4 to about 7 wt% oxide, based upon the total weight of the solids in the electrode ink.

10. (Original) The method of Claim 1, wherein the surface gold concentration is extends a thickness of less than or equal to about 400 nanometers into the electrode.

11. (Original) The method of Claim 10, wherein the surface gold concentration is extends a thickness of about 100 to about 300 nanometers into the electrode.

12. (Original) The method of Claim 11, wherein the electrode has an electrode thickness of about 4 to about 20 micrometers.

13. (Original) An electrode produced by the process of Claim 1.

14-21. (Cancelled)